

March 20, 2018

**HAND DELIVERED**

Mr. Darrell Nitschke  
Executive Secretary  
North Dakota Public Service Commission  
600 East Boulevard Avenue, Dept. 408  
Bismarck, ND 58505-4080

**RE: Andeavor Field Services LLC — 8" &  
6" NGL Pipelines – McKenzie, Billings,  
Stark Counties, North Dakota - Case  
Number PU-18-072 – Supplemental  
Application Information**

Dear Mr. Nitschke:

This letter is a follow up to a request received from your office for supplemental information in support of Andeavor Field Services LLC's ("Andeavor") Application for a Certificate of Corridor Compatibility and Route Permit ("Application") for the Y-Grade Hub Pipeline Project to be located in McKenzie, Billings, and Stark Counties (the "Project") filed with the North Dakota Public Service Commission ("Commission") on February 5, 2018. *See* Case No. PU-18-072, Docket # 1.

As an initial matter, Andeavor provides clarification as to certain items requested by Commission staff. First, page 23 of the Application states "Andeavor will verify the non-use of Redmond Brothers Airstrip, Watson Private Airstrip, and Tachenko Airstrip if the pipeline traverses the airport boundary." Andeavor has further reviewed the Project in proximity to these airstrips, and the Project does not traverse the boundary of any of these airstrips. Specifically, the Redmond Brothers Airstrip is located 3.1 miles from the Project, the Tachenko Airstrip is located 10 miles from the Project, and the Watson Airstrip is located 13.5 miles from the Project. These airstrips will not be impacted by the Project.

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The Commission also requested information as to the Best Management Practices (“BMPs”) of Andeavor for the Project. The Storm Water Pollution Prevention Plan outlines BMPs that will be utilized for that stage of the Project. *See* Application Appendix B. Additionally, Andeavor has incorporated BMPs into all stages of the Project and the documentation applicable to each stage as set forth in the Application and the supplemental documents submitted herewith. Accordingly, the BMPs of Andeavor are not specifically set forth in any one, separate document.

Commission staff inquired as to the status of a tree and shrub plan for the Project. A Tree and Shrub Inventory and Sampling Plan is included herewith for review and approval by the Commission.

The Commission also requested various supplemental documents referenced in the Application, including an operation and maintenance manual, additional emergency response plans, information regarding the damage protection program, and the results of the High Consequence Area Location Study. All of this information has been gathered for submission to the Commission in order to deem the Application of Andeavor complete. However, these documents contain confidential information. In addition to an electronic copy of these documents, Andeavor submits herewith the following:

1. Application of Andeavor Field Services LLC to Protect Confidential Information and Waiver for Redacted Version of Information, with the following documents for which protection is sought:
  - a. Corrosion Control Program (NDPSC 000001 - NDPSC 000052);
  - b. Pipeline Operations and Maintenance Manual;
    - Note: the Operations and Maintenance Manual is broken into separate PDF documents for ease of electronic access. *See* Documents Bates-stamped NDPSC 000053 - NDPSC 000329.
    - The Operations and Maintenance manual also includes the Damage Prevention Program. *See* NDPSC 000300 - NDPSC 000329.
  - c. High Consequence Area Location Study (NDPSC 000330 - NDPSC 000415); and
  - d. Tesoro High Plains Pipeline Oil Spill Response Plan (NDPSC 000416 – NDPSC 000785).

These documents will be applicable to the Project, and will be updated as necessary to reflect any modifications or additions based on Project needs.

As noted, a disk containing electronic versions of the referenced documents is included herewith based on conversations with Commission staff allowing for the waiver of the hard copy requirement. Hard copies of any of the documents are available upon request.

If you should have any questions, please advise.

Sincerely,

A handwritten signature in blue ink, appearing to read 'LB', with a large, stylized flourish extending from the bottom right.

LAWRENCE BENDER

LB/dmk

63527927.1

# TREE AND SHRUB INVENTORY AND SAMPLING PLAN



Y-GRADE HUB PIPELINE PROJECT

PU-18-072

*March 8, 2018*



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## **Introduction**

Andeavor Field Services LLC (Andeavor) proposes to construct, own, and operate approximately 44 miles of 6-inch and 8-inch natural gas liquids (NGLs) pipeline extending from near Johnson's Corner, North Dakota, to a rail loading facility located near Fryburg, North Dakota. This Plan outlines the process for completing the tree and shrub inventory, in compliance with the North Dakota Public Service Commission (Commission) Tree and Shrub Mitigation Specifications (Appendix A).

## **Inventory Methods**

Andeavor will inventory trees and shrubs, including those considered invasive species, to be cleared within the ROW easement. Inventories will be documented on standard forms and will include the inventory location, species present, and number of trees and shrubs in the location. An example form is found in Appendix B.

## **Windbreaks, Shelterbelts, and Other Planted Areas**

In windbreaks, shelterbelts, and other planted areas, trees and shrubs anticipated to be cleared regardless of size will be counted by direct stem count. All trees, regardless of size, will be inventoried for replacement.

## **Native Growth Areas**

In native growth areas, trees that are one-inch or greater diameter at breast height (DBH) will be inventoried for replacement. Inventories will be conducted using direct counts when feasible. Counts will include native and invasive species.

In native growth areas, shrubs anticipated to be cleared in the permanent right-of-way will be inventoried for replacement. In native growth areas outside the permanent right-of-way, shrubs shall be cut flush with the surface of the ground, taking care to leave the naturally occurring seed bank and root stock intact. If soil disturbance is necessary, the native topsoil shall be preserved and replaced after construction. Shrubs shall be allowed to regenerate naturally where native topsoil is preserved and replaced. Where native topsoil is not preserved and replaced, shrubs anticipated to be cleared shall be inventoried for replacement.

In native growth areas, shrubs that form colonies (such as buffalo currant, chokecherry, dogwood, plum, pussy willow, etc.) and that are cut flush with the ground surface and not cleared, so as to leave the naturally occurring seed bank and root stock intact will not be direct stem counted. Instead, the area will be delineated on an aerial photo and indicated on construction drawings to not be cleared or have the ground disturbed. If ground disturbance occurs, Andeavor will conduct a direct stem count of the disturbance area or estimate the number of stems using a Commission approved sampling estimate method.

### **Tree Sampling Method**

Per the Commission's Tree and Shrub Inventory Specifications, in high-density woodland areas, Andeavor proposes the following sampling method for the tree inventory. The dimensions of the entire woodland stand within the ROW will be delineated to determine the area of the woodland. Tree and shrub counts will be made in representative sample site areas within the woodland. Transects will be developed and the circular sample sites placed along the transect. The number of sample sites within a woodland stand will be dependent on woodland size and uniformity. A smaller, more uniform woodland stand would require fewer sample sites than a larger, less uniform woodland stand.

The sample sites will be 0.10 acres (37.24-foot radius circles). A rope 37.24 feet in length will be attached to a central stake and rotated in a circle (Appendix C). Trees and shrubs within the circle will be counted. Tree and shrub density for the entire woodland area within the ROW will be calculated based on the average density from all of the sample locations within the woodland, weighted against the woodland size.

### **Shrub Sampling Method**

Per the Commission's Tree and Shrub Inventory Specifications, in high-density woodland areas, Andeavor proposes the following sampling method for the shrub inventory. The dimensions of the entire woodland stand within the ROW will be delineated to determine the area of the woodland. Shrub counts will be made in representative sample site areas within the woodland. Transects will be developed and the circular sample sites placed along the transect. The number of sample sites within a woodland stand will be dependent on woodland size and uniformity. A smaller, more uniform woodland stand would require fewer sample sites than a larger, less uniform woodland stand.

The sample sites will be 0.001 acres (3.72-foot radius circles). A rope 3.72 feet in length will be attached to a central stake and rotated in a circle (Appendix D). Shrubs within the circle will be counted. Tree and shrub density for the entire woodland area within the ROW will be calculated based on the average density from all of the sample locations within the woodland, weighted against the woodland size.

## Appendix A

### Tree and Shrub Mitigation Specifications

#### Inventory

1. Trees and shrubs anticipated to be cleared, including those that are considered invasive species or noxious weeds (e.g., *Caragana arborescens*, *Elaeagnus angustifolia*, *Rhamnus cathartica*, *Tamarix chinensis*, *T. parviflora*, *T. ramosissima*, *Ulmus pumila*), must be inventoried before cutting. The inventory must record the location, number, and species of trees and shrubs.
2. In windbreaks, shelterbelts and other planted areas, trees or shrubs anticipated to be cleared, regardless of size, must be inventoried for replacement.
3. In native growth areas, trees anticipated to be cleared that are 1-inch diameter at breast height ("dbh") or greater must be inventoried for replacement.
4. In native growth areas, shrubs anticipated to be cleared in the permanent right-of-way must be inventoried for replacement.
5. In native growth areas outside the permanent right-of-way, shrubs must be cut flush with the surface of the ground, taking care to leave the naturally occurring seed bank and root stock intact. If soil disturbance is necessary, the native topsoil must be preserved and replaced after construction. Shrubs must be allowed to regenerate naturally where native topsoil is preserved and replaced. Where native topsoil is not preserved and replaced, shrubs anticipated to be cleared must be inventoried for replacement.
6. In native growth areas, trees and shrubs may be inventoried by actual count or by a sampling method that will properly represent the woody vegetation population. A sampling plan developed by the company, filed with the North Dakota Public Service Commission (Commission) and approved prior to the start of construction must define the sampling method to be used for trees, for tall shrubs and for low shrubs. The data from the sample plots must be extrapolated

to the total acreage of the wooded area to be cleared to determine the species and quantity of trees and shrubs to be replaced.

### **Clearing for Construction**

7. Trees and shrubs must be selectively cleared, leaving mature trees and shrubs intact where practical.
8. The maximum width of clear cuts through windbreaks, shelterbelts and all other wooded areas is 50 feet, unless otherwise approved by the Commission.
9. If the area of trees or shrubs actually cleared differs from the area inventoried, the difference in number of trees and shrubs to be replaced must be noted on the inventory.

### **Replacement**

10. Prior to tree and shrub replacement, documentation identifying the number and variety of trees and shrubs removed, as well as the mitigation plan for the proposed number, variety, type, location and date of replacement plantings, must be filed with the Commission for approval.
11. Two 2-year-old saplings must be planted for every one tree removed. Two shrubs (stem cuttings) must be planted for every one shrub removed.
12. Except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service. Invasive or noxious species must be replaced by similar non-invasive or non-noxious species suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.
13. Tree and shrub replacement must not be conducted within a 20 to 30-foot wide path over the pipeline to facilitate visual inspections of the right-of-way in accordance with U.S. Department of Transportation safety regulations.



14. Landowners must be given the option of having replacement trees and shrubs planted on the landowner's property, either on or off the right-of-way. The landowner must also be given the opportunity to waive those options in writing in order to have replacement trees and shrubs planted off the landowner's property.
15. At the conclusion of the project, documentation identifying the actual number, variety, type, location and date of the replacement plantings must be filed with the Commission.
16. Tree and shrub replacements must be inspected annually, in September, for three years. The first annual inspection must be at least one year from the anniversary date of the original plantings. A report of each annual inspection must be submitted to the Commission by October 1 of each year, documenting the condition of plantings and any woodlands work completed as of September of each year. If after the third annual report the survival rate is less than 75%, the Commission may order additional planting(s).

## Appendix B

## Sampling Form

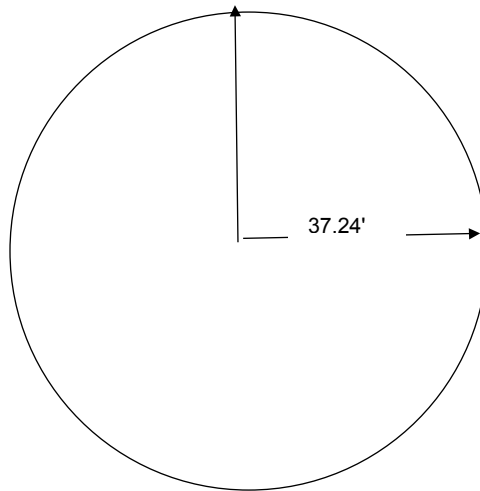
[illegible]

## Appendix C

### Tree Sampling Method

#### Sample Plot

- Circular sample plots with a radius of 37.24 feet, or area equivalent to 0.10 acres created with a central stake and rope.
- The rope, 37.24 feet in length, anchored to the central stake and rotated in a circle.



#### Tree Counts

- Direct stem counts from each sample site.
- Tallied on work sheet by species.

#### Woodland size

- GPS points taken in the field around boundary.
- GIS used to calculate acreage.

#### Calculations

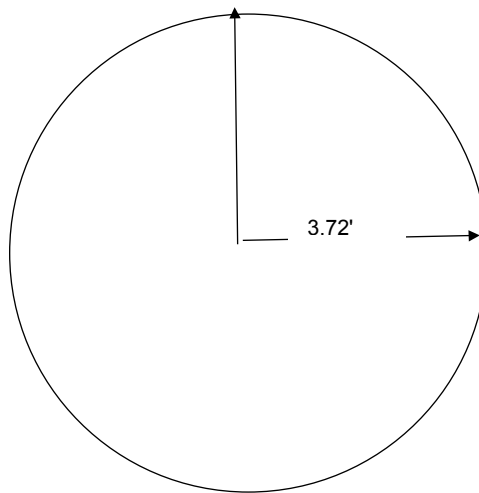
- Average determined from all plots sampled in a woodland area or area is equivalent to stems/0.10 acre.
- Converted to a per acre basis (average times 10).
- Total number per woodland determined by multiplying average number per acre with woodland size.

## Appendix D

### Shrub Sampling Method

#### Sample Plot

- Circular sample plots with a radius of 3.72 feet, or area equivalent to 0.001 acres created with a central stake and rope.
- The rope, 3.72 feet in length, anchored to the central stake and rotated in a circle.



#### Shrub Counts

- Direct stem counts from each plot.
- Tallied on work sheet by species.

#### Woodland size

- GPS points taken in the field around boundary.
- GIS used to calculate acreage.

#### Calculations

- Average determined from all plots sampled in a woodland area or area is equivalent to stems/0.001 acre.
- Converted to a per acre basis (average times 1,000).
- Total number per woodland determined by multiplying average number per acre with woodland size.